As mentioned earlier in this study, Dr. Wodehouse kindly furnished a technical description of the pollen. This description is quoted below, along with Dr. Wodehouse's interesting comments:

"Pollen grains uniform, broadly ellipsoidal, 15.4 × 17.1$\mu$; tricolpate, with furrows long and tapering to pointed ends, without internal thickenings, their membranes minutely flecked, without a well defined pore but more or less bulging in the center; exine moderately thick, smooth or faintly and finely granular; intine thin, slightly thickened beneath the furrows.

"This grain almost exactly matches that of *Ternstroemia granulata* Kr. & Urb., differing principally in the smoother texture of its exine. It is also similar to those of Ochnaceae, being almost exactly matched by that of *Neckia serrata*. It is similar to those of Flacourtiaceae but can be distinguished by its lack of the internal thickenings along the furrow margins, which characterize the grains of the latter family, a character which is found to be more significant than its inconspicuousness in appearance would suggest.

"It is rather interesting that when I first got your pollen sample I attempted to key it out, using the key in my book and the one in the Torrey Bulletin referred to above; the pollen ran right out to Theaceae. I rejected this answer because I did not know that the Theaceae could have anthers opening by apical pores, and I knew that my pollen records were far from complete, with many unfilled gaps where this specimen might very well belong. I believe that if my records had been complete, the pollen would have told at once that the specimen belonged either to the Theaceae or Ochnaceae — the grains of the two are essentially the same."

## EXPLANATION OF PLATE

*Sladenia celastrifolia* Kurz. All figures except habit sketch enlarged. The drawing of the pollen grain is highly magnified and has been contributed by Dr. R. P. Wodehouse.

FIG. 1. Habit. FIG. 2. Open flower. FIGS. 3–5. Stamens. FIGS. 6–8. Ovary. FIG. 9. Pollen grain. FIG. 10. Seed (habit and cross-section).

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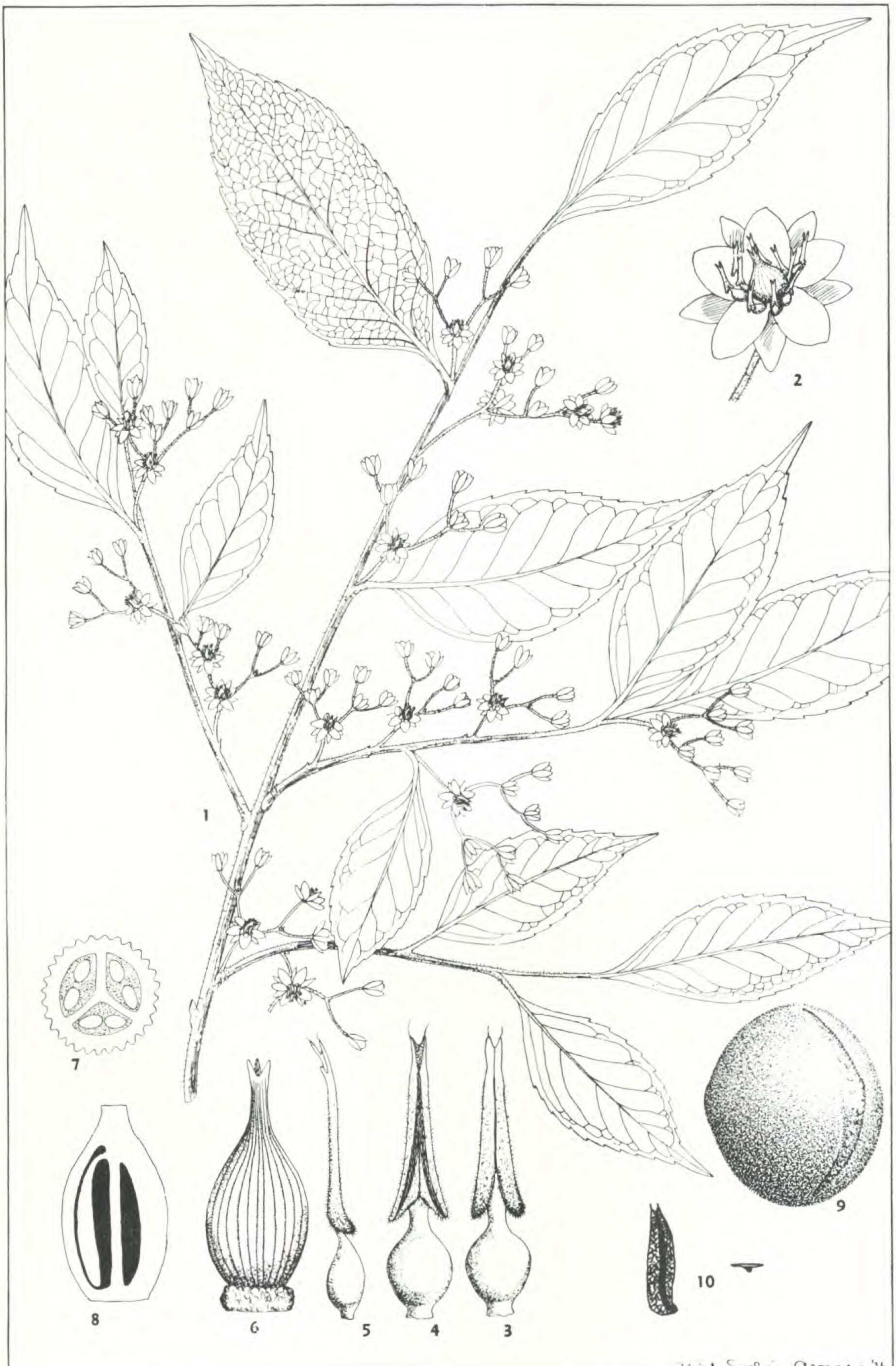


SLADENIA CELASTRIFOLIA KURZ

# ON THE IDENTITY OF THE GENUS BARANDA LLANOS

E. D. MERRILL

IN 1857, FATHER LLANOS, who attempted without much success to carry on the botanical work of Father Blanco who had died in Manila in 1845, very inadequately described the new genus *Baranda*.* His material was from forests near Angat, Bulacan Province, Luzon. F.-Villar in 1880, without discussion, unhesitatingly reduced the genus to *Barringtonia* Forst., and the species to the extra-Philippine *B. macrostachys* Kurz. This disposition of the genus was accepted by the authors of Index Kewensis.

In 1918 when I first considered the genus, Sp. Blancoanae 382. 1918, and again, Enum. 3: 143. 1923, I could not determine its status from the very meager description, and in 1923 left it as a genus of doubtful status at the end of the Lecythidaceae. The original very inadequate description is as follows:

"*Baranda Angatensis*. Arbor foliis ad extremitatem confertis, cuneatis, integerrimis, glaucis, glabris. Flores ad apices trunci orti, racemosi. Calyx 5-fidus laciniis rotundatis. Stam - - -. Stylus 1. Germen - - -. Nux minima, magnitudine pisi (an matura grandior?) exangulata, 2–3 loculares. Seminibus - - - Nominavi ad memoriam cl. lithologi D. Isidori de Baranda, qui in Philippinis minarum inspector fuit."

In the meantime, however, Hallier, Beih. Bot. Centralbl. 39(2): 94. 1921, in continuation of his discussion of his correct reduction of *Suringaria* Pierre to *Symplocos* Jacq., had correctly reduced *Baranda* Llanos to *Symplocos* Jacq., as he stated the case: "*Baranda angatensis* Llanos (Wälder bei Angat; Llanos in Herb. Lugd.-Bat.) im Kew-index gleichenfalls zu *Barringtonia* statt zu *Symplocos* ((*oblongifolia*) Vidal!) gebrachte worde." This reduction, obscurely published in the course of a long discussion, which was rather characteristic of Hallier's presentation of often important conclusions, escaped my attention entirely; but Knuth, in his monographic treatment of the Barringtoniaceae, Pflanzenreich 105(IV. 219): 73. 1939, noted it. He correctly eliminated *Baranda* Llanos from the Barringtoniaceae, making it a synonym of *Symplocos* Jacq. as Hallier had correctly concluded.

In August, 1950, in examining various types of Malaysian species in the Rijksherbarium, Leiden, I noted this Llanos specimen. It was collected in forests near Angat in May, 1854, and was sent to Blume by Llanos, apparently in order to secure an expression of opinion regarding the proposed new genus. The specimen is with immature fruits. The short and very incomplete description is somewhat misleading. Thus the "flores ad species truncti orti" really refers to the spikes (not racemes)

*Mem. Acad. Cienc. Madr. III. 2: 502. 1857; F.-Vill. & Naves in Blanco, Fl. Filip. ed. 3, 4(1): 102. 1880.

being arranged along the ultimate branchlets below the leaves. No data were given by Llanos as to whether the leaves were alternate or opposite, and the petals and stamens were unknown to him; neither did he indicate whether the ovary was superior or inferior. The descriptive phrase "foliis - - - cuneatis" applies only to the base of the leaves.

It is well known that Llanos did send some Philippine botanical material to the De Candolle herbarium in Geneva; but this is the first case of record where he sent material to the Rijksherbarium in Leiden. Incidentally it is apparent that Blanco also sent some material to Blume in Leiden, although probably not much. The only Blanco specimen that I noted in the Rijksherbarium is a single specimen (actually a single detached leaf) of *Ficus glomerata* Blanco (non Roxb.) = *Ficus minahassae* Miq.

Thus it is that the generic name *Baranda* Llanos (1757) is a synonym of *Symplocos* Jacq. (1760). The synonymy of the species, as at present understood is:

**Symplocos polyandra** (Blanco) Brand, Pflanzenr. 6(IV. 242): 36. 1901, quoad syn. Blanco, excl. descr.; Merr. Sp. Blancoanae 304. 1918, Enum. 3: 301. 1923.

*Guettarda polyandra* Blanco, Fl. Filip. ed. 2, 500. 1845.

*Carlea oblongifolia* Presl, Epim. 217. 1851.

*Symplocos oblongifolia* Rolfe, Jour. Bot. **23**: 214. 1885; Brand, Pflanzenr. **6**(IV. 242): 55. 1901.

*Baranda angatensis* Llanos, Mem. Acad. Cienc. Madr. III. **2**: 502. 1857; F.-Vill. & Naves in Blanco, Fl. Filip. ed. 3, **4**(1): 102. 1880; Merr. Sp. Blancoanae 382. 1918.

*Barringtonia macrostachya* sensu F.-Vill. Novis. App. Fl. Filip. 87. 1880, non Kurz.

This is a very characteristic and widely distributed Philippine species, represented by numerous collections. It extends from central Luzon to Palawan and Mindanao, and also occurs in Borneo. The Bornean *Symplocos superba* Brand, of which I have not seen the type, should be compared with this species. For the benefit of those who are tempted to subdivide *Symplocos* Jacq., *Baranda* Llanos (1857) is generically identical with *Carlea* Presl (1851).

Perhaps a word is in order regarding the application of the name *Symplocos polyandra* (Blanco) Brand to this strongly marked species. The type of *Guettarda polyandra* Blanco was from the same locality as the type of *Baranda angatensis* Llanos (Angat, Bulacan Province, Luzon), and *Bur. Sci. 34206 Ramos & Edano* is a topotype of both. Blanco's description is distinctly definite and can apply to no other known species in any group of plants; he was merely misled by the inferior ovary, did not note that the distinctly crowded leaves were alternate, and placed his new species in *Guettarda* because of its numerous stamens and inferior ovary: "He colocado estos árboles con la *Guettarda*, sin embargo del número de los estambres." Of the *Guettarda* species that he recognized

*G. vermicularis* Blanco is correctly placed as to the genus, but that species is a synonym of *G. speciosa* Linn., *G. jasminiflora* Blanco = *G. speciosa* Blanco is *Alangium chinense* (Lour.) Rehd., of the Alangiaceae, and *G. polyandra* Blanco is the *Symplocos* under consideration. Thus within the concept of a single genus Blanco included representatives of three different families of plants, the Rubiaceae, the Alangiaceae, and the Symplocaceae.

Brand was misled by Vidal's erroneous identification of certain of the latter's collections, the basis of *Symplocos villarii* Vidal, as possibly representing Blanco's species. While he accepted Blanco's specific name as "*Symplocos polyandra* (Blanco?) Brand," he states: "Descriptio a cl. Blanco data minime cum speciminibus visis congruit; sed nescio an Cl. Vidal specimen originarium cl. Blanco viderit." No Blanco type is extant, and Vidal merely referred *Guettarda polyandra* Blanco to *Symplocos villarii* Vidal, with expressed doubt, including it as a synonym of *S. villarii* Vid. thus: "*Guettarda polyandra* Blanco 2 a. ed. 500 ? (hojas enteras)," Rev. Pl. Vasc. Filip. 178. 1886. Brand's description applies to the entirely different *Symplocos villarii* Vidal (*S. pseudospicata* Vidal).

As the actual type of *Baranda angatensis* Llanos is extant, and as Blanco preserved no specimens to represent his *Guettarda polyandra*, I propose the Angat collection *Bur. Sci. 34206 Ramos & Edano* in the herbarium of the Arnold Arboretum, duplicates of which will be found in various other herbaria, as a neotype of *Guettarda polyandra* Blanco. As noted above it is a topotype of Blanco's species and also a topotype of *Baranda angatensis* Llanos.

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